(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 28 July 2005 (28.07.2005)

PCT

(10) International Publication Number WO 2005/069616 A1

(51) International Patent Classification7:

H04N 7/015

(21) International Application Number:

PCT/KR2004/003559

(22) International Filing Date:

31 December 2004 (31.12.2004)

(25) Filing Language:

Korean

(26) Publication Language:

English

(30) Priority Data: 19 January 2004 (19.01.2004) 10-2004-0003741 KR

(71) Applicant (for all designated States except US): Electronics and Telecommunications Research Institute [KR/KR]; 161, Gajeong-dong, Yuseong-gu, Daejon 305-350 (KR).

(72) Inventors: and

(75) Inventors/Applicants (for US only): PARK, Sung-Ik

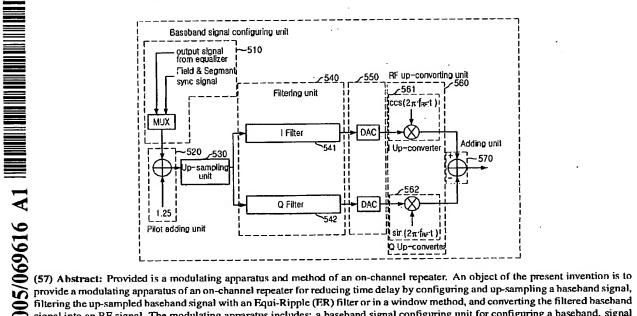
[KR/KR]; 146-14 Sinseong-dong, Yuseong-gu, Daejon 305-345 (KR). LEE, Yong-Tae [KR/KR]; #203-1307 Mokryeon Apt., Dunsan 1-dong, Seo-gu, Daejon 302-771 (KR). EUM, Ho-Min [KR/KR]; 145-13, Sinseong-dong, Yuseong-gu, Daeion 305-804 (KR). KIM, Heung-Mook [KR/KR]; ETRI Dorm. Gajeong-dong, Yuseong-gu, Daejon 305-350 (KR). SEO, Jae-Hyun [KR/KR]; #102-1102 Hanul Apt., Sinseong-dong, Yuseong-gu, Daejon 305-707 (KR). KIM, Seung-Won [KR/KR]; #105-202 Gukhwa Dongseong Apt. Samcheon-dong, Seo-gu, Daejon 302-782 (KR). LEE, Soo-In [KR/KR]; #106-606 Clover Apt., Dunsan-dong, Seo-gu, Daejon 302-772 (KR).

(74) Agent: SHINSUNG PATENT FIRM; 2F, Line Bldg., 823-30, Yeoksam-dong, Kangnam-ku, Seoul 135-080 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,

[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR MODULATING OF ON-CHANNEL REPEATER



filtering the up-sampled haseband signal with an Equi-Ripple (ER) filter or in a window method, and converting the filtered haseband signal into an RF signal. The modulating apparatus includes: a baseband signal configuring unit for configuring a baseband. signal by combining an input field and a segment sync signal; a pilot adding unit for adding a pilot signal to the baseband signal; a filtering unit for filtering the baseband signal with the pilot signal; and an RF up-converting unit for up-converting the filtered signal into an RF signal. The present invention is used to form an on-channel repeating network in a transmitting system including a digital TV broadcasting system.

WO 2005/069616 A1

PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW. SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR. NE, SN, TD, TG).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.